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Kamii et al.

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(54) **MOBILE TERMINAL DEVICE, STORAGE MEDIUM, AND METHOD FOR CONTROLLING MOBILE TERMINAL DEVICE**

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(58) **Field of Classification Search**
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See application file for complete search history.

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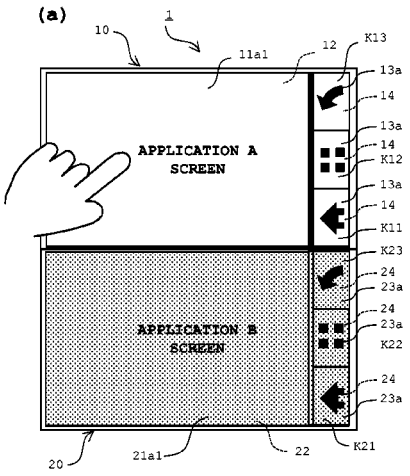
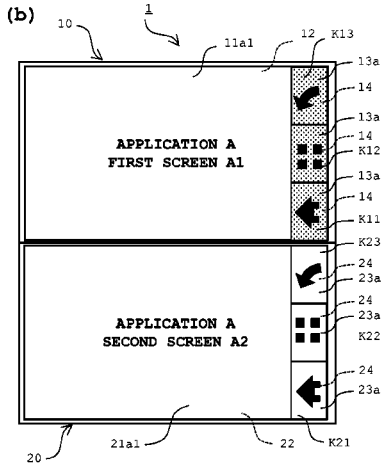
(57) **ABSTRACT**

A cellular phone includes a first display; a second display; and a CPU which executes a first processing and a second processing according to an input with respect to a display detected by the panel sensors, and displays screens based on the first processing and the second processing on the display, respectively. The CPU executes a control for distinguishing the display displaying the screen in an active state from the display displaying the screen in an inactive state with respect to at least one of the display.

11 Claims, 11 Drawing Sheets





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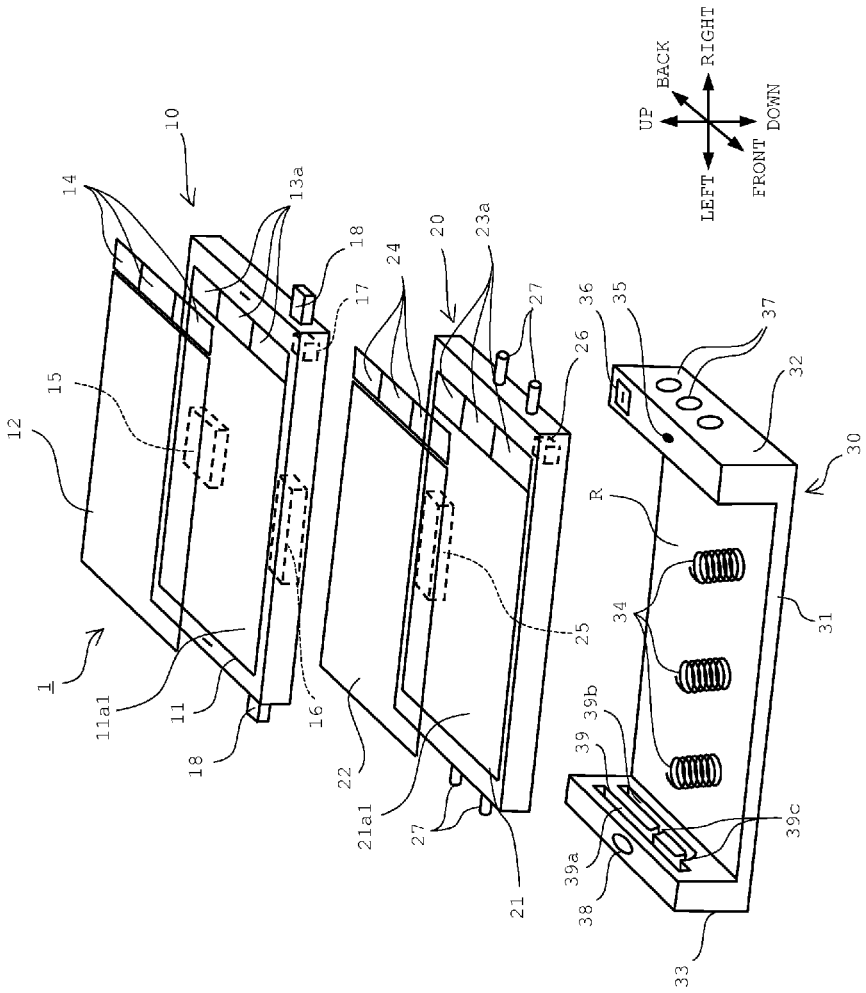
UP
BACK
RIGHT
LEFT
FRONT
DOWN
1
10
11
11a1
12
13a
14
15
16
17
18
20
21
21a1
22
23a
24
25
26
27
30
31
32
33
34
35
36
37
38
39
39a
39b
39c
R

FIG. 1

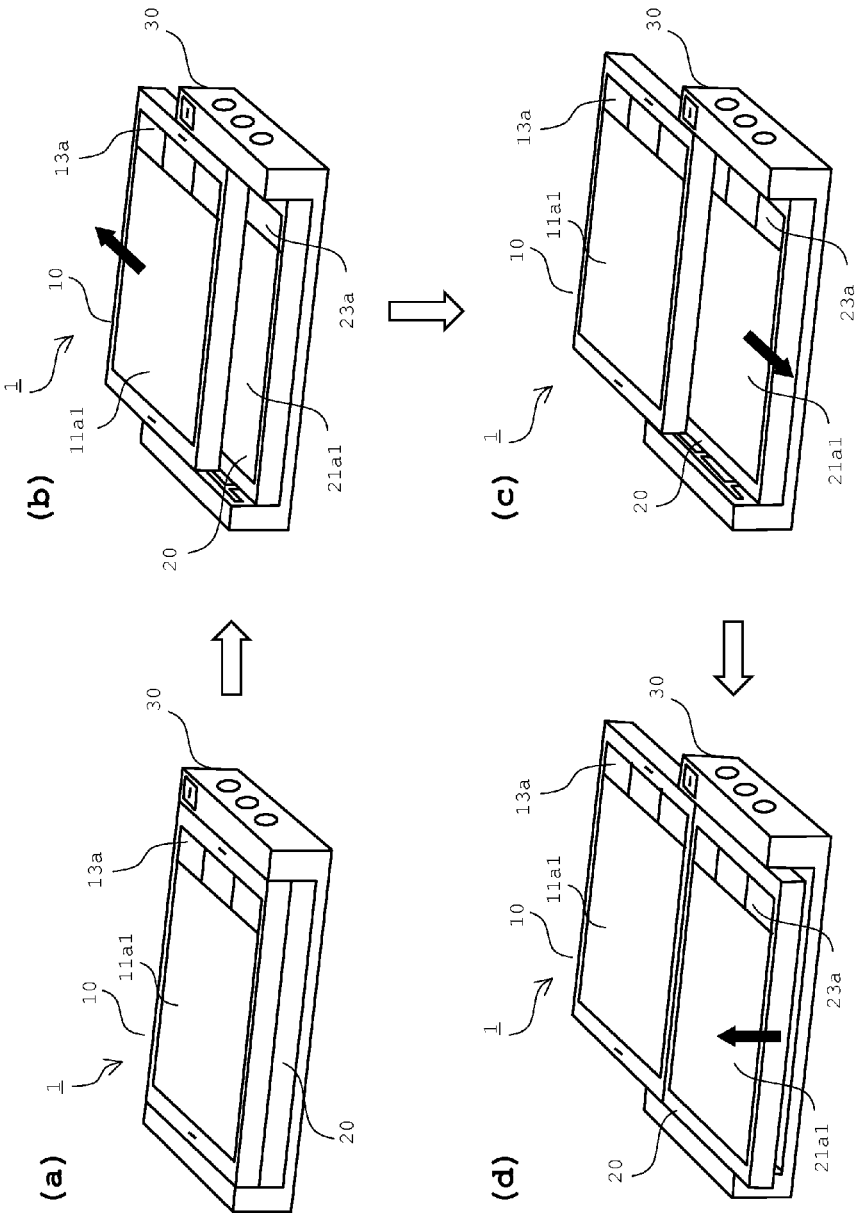

FIG. 2

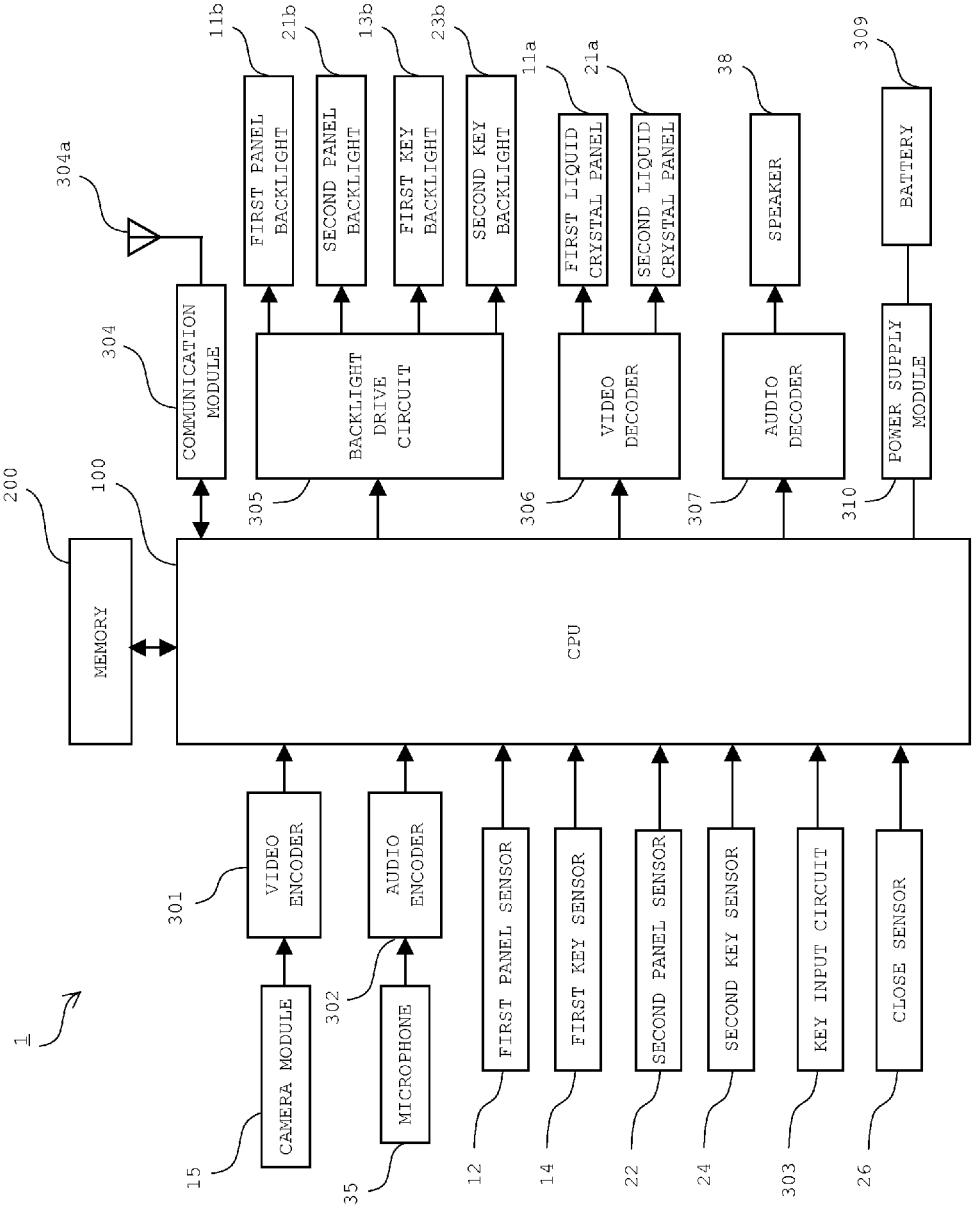
1
CAMERA MODULE
15
VIDEO ENCODER
301
MICROPHONE
35
AUDIO ENCODER
302
FIRST PANEL SENSOR
12
FIRST KEY SENSOR
14
SECOND PANEL SENSOR
22
SECOND KEY SENSOR
24
KEY INPUT CIRCUIT
303
CLOSE SENSOR
26
MEMORY
200
CPU
100
COMMUNICATION MODULE
304
304a
BACKLIGHT DRIVE CIRCUIT
305
VIDEO DECODER
306
AUDIO DECODER
307
POWER SUPPLY MODULE
310
FIRST PANEL BACKLIGHT
11b
SECOND PANEL BACKLIGHT
21b
FIRST KEY BACKLIGHT
13b
SECOND KEY BACKLIGHT
23b
FIRST LIQUID CRYSTAL PANEL
11a
SECOND LIQUID CRYSTAL PANEL
21a
SPEAKER
38
BATTERY
309

FIG. 3

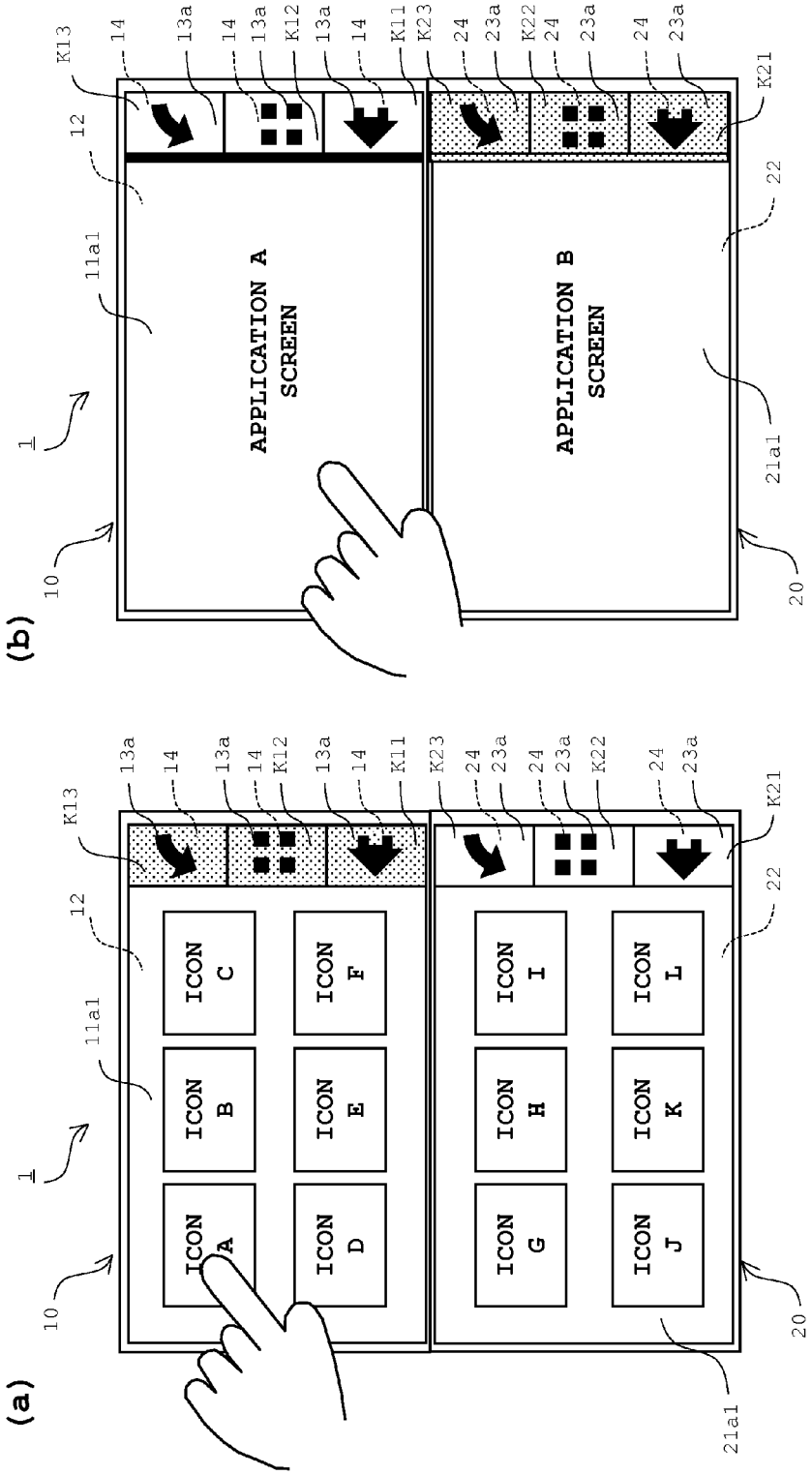
(a)
(b)
1
10
11a1
12
13a
14
20
21a1
22
23a
24
K11
K12
K13
K21
K22
K23
ICON A
ICON B
ICON C
ICON D
ICON E
ICON F
ICON G
ICON H
ICON I
ICON J
ICON K
ICON L
APPLICATION A SCREEN
APPLICATION B SCREEN

FIG.4

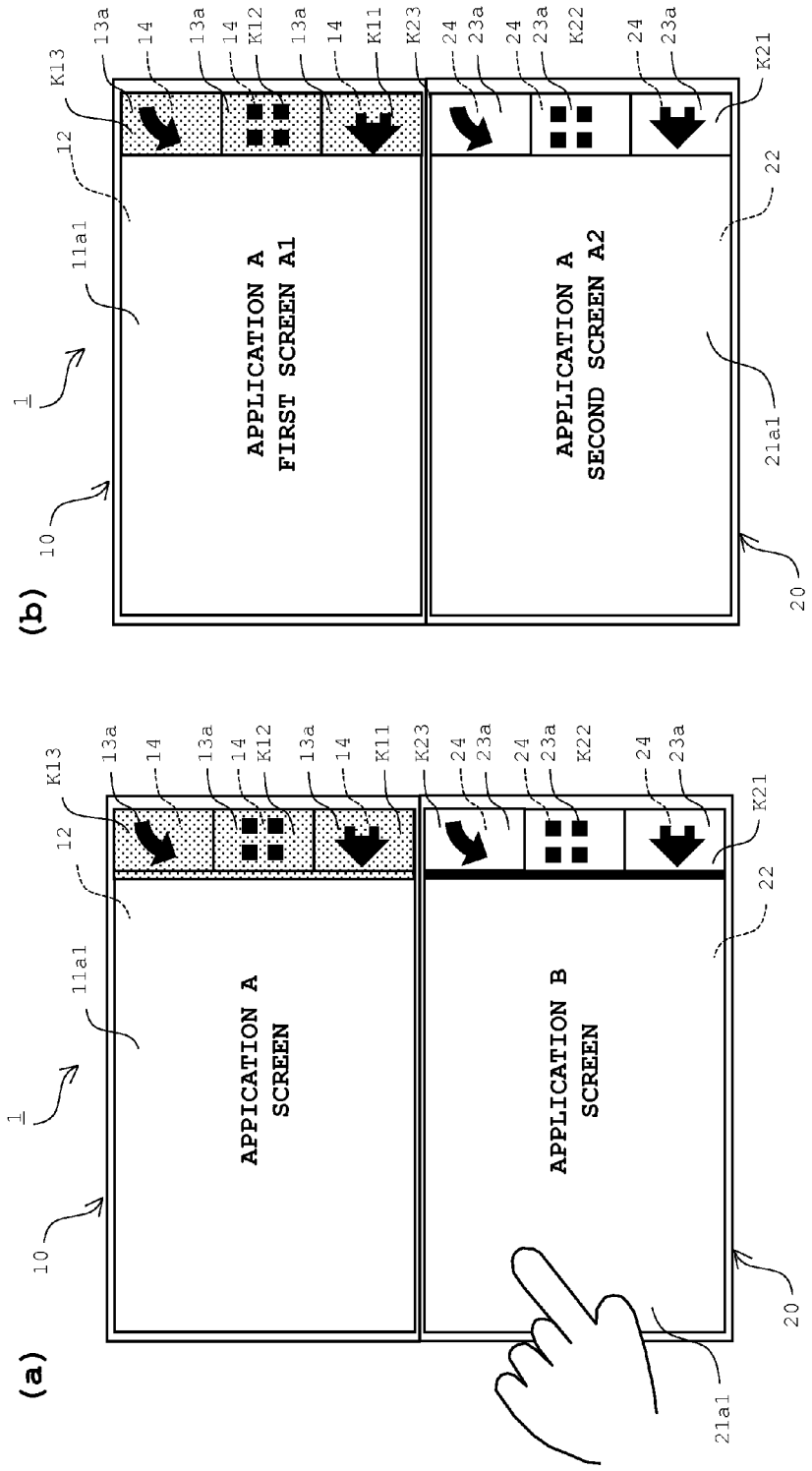
(a)
(b)
APPLICATION A SCREEN
APPLICATION B SCREEN
APPLICATION A FIRST SCREEN A1
APPLICATION A SECOND SCREEN A2
1
10
11a1
12
13a
14
K11
K12
K13
20
21a1
22
23a
24
K21
K22
K23

FIG. 5

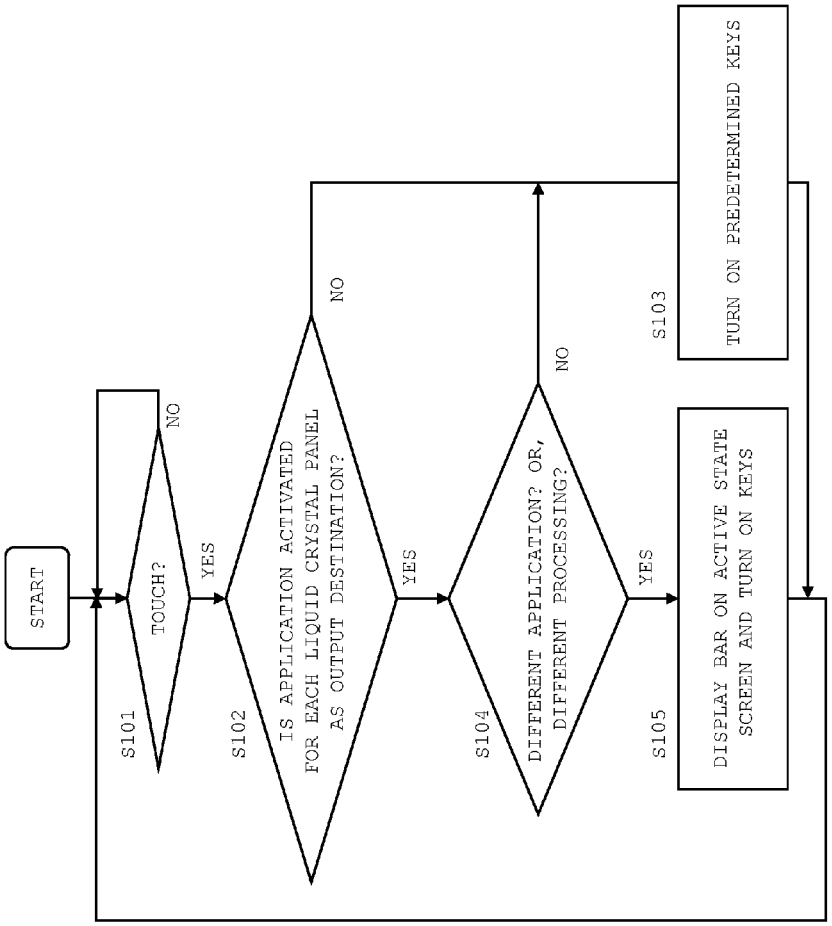
START
TOUCH?
S101
NO
YES
IS APPLICATION ACTIVATED FOR EACH LIQUID CRYSTAL PANEL AS OUTPUT DESTINATION?
S102
NO
YES
DIFFERENT APPLICATION? OR, DIFFERENT PROCESSING?
S104
NO
YES
TURN ON PREDETERMINED KEYS
S103
DISPLAY BAR ON ACTIVE STATE SCREEN AND TURN ON KEYS
S105

FIG. 6

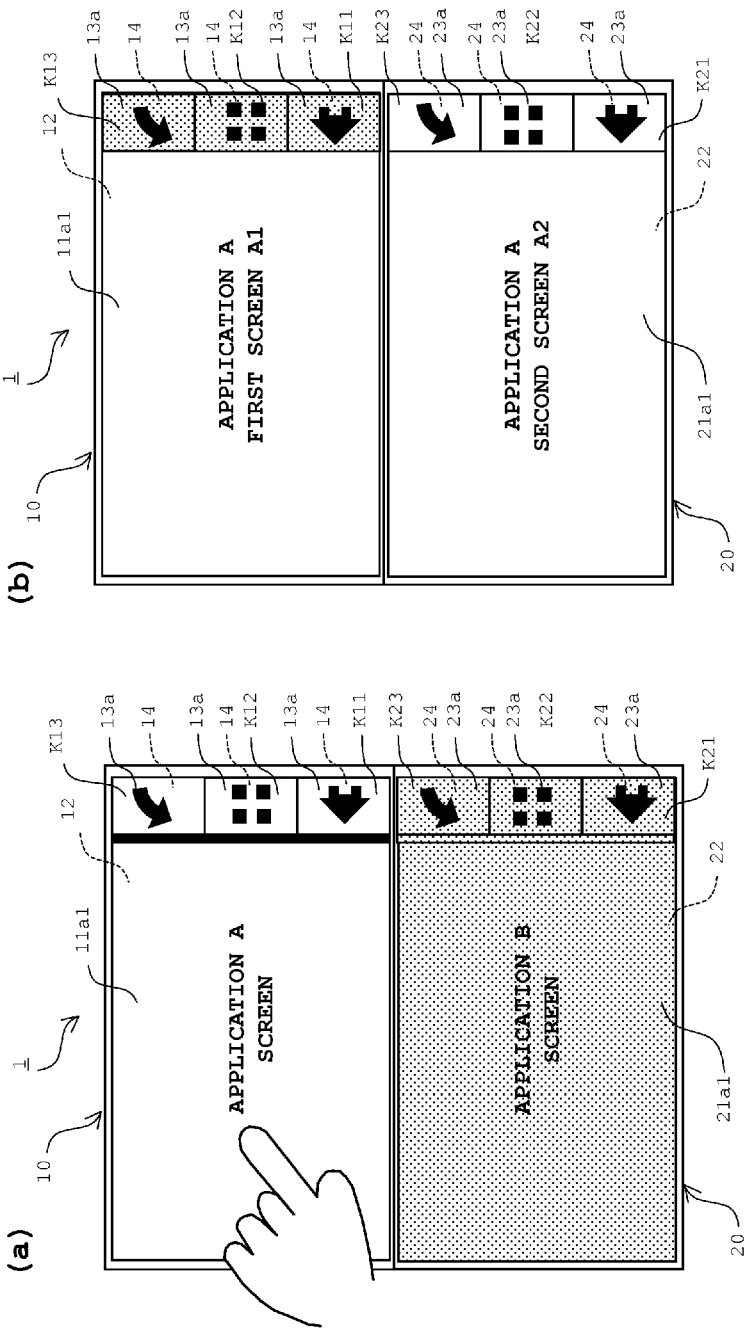
(a)
(b)
APPLICATION A SCREEN
APPLICATION B SCREEN
APPLICATION A FIRST SCREEN A1
APPLICATION A SECOND SCREEN A2
1
10
11a1
12
13a
14
K11
K12
K13
K21
K22
K23
20
21a1
22
23a
24

FIG. 7

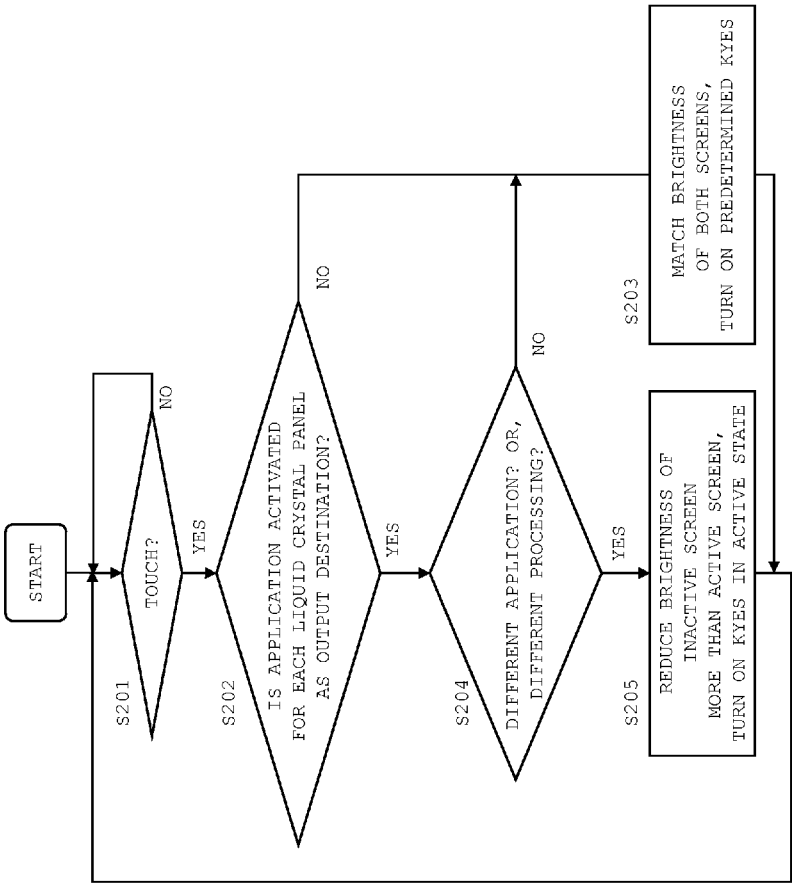
START
TOUCH?
S201
NO
YES
IS APPLICATION ACTIVATED FOR EACH LIQUID CRYSTAL PANEL AS OUTPUT DESTINATION?
S202
NO
YES
DIFFERENT APPLICATION? OR, DIFFERENT PROCESSING?
S204
NO
YES
MATCH BRIGHTNESS OF BOTH SCREENS, TURN ON PREDETERMINED KYES
S203
REDUCE BRIGHTNESS OF INACTIVE SCREEN MORE THAN ACTIVE SCREEN, TURN ON KYES IN ACTIVE STATE
S205

FIG.8

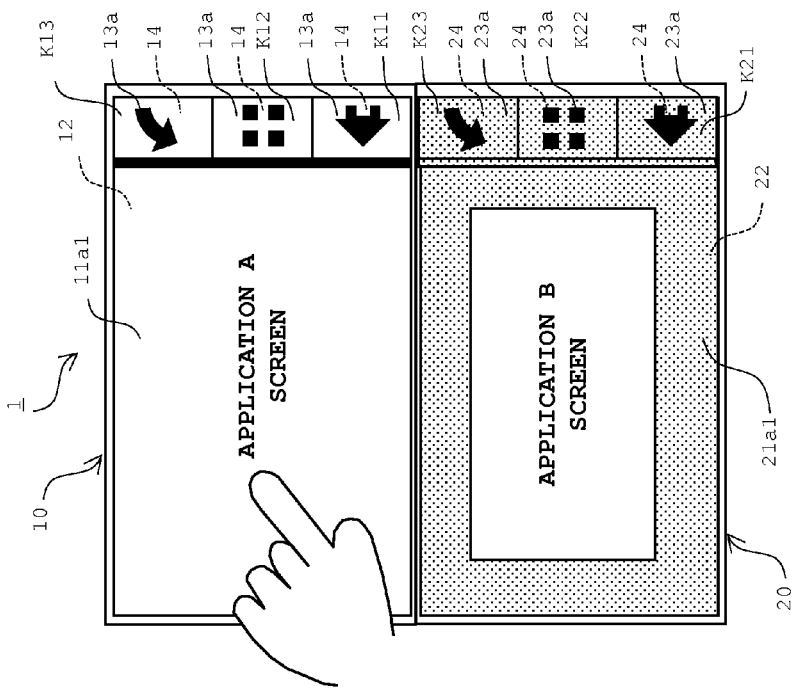
K13
13a
14
13a
14
K12
13a
14
K11
K23
24
23a
24
23a
K22
24
23a
K21
12
22
11a1
APPLICATION A SCREEN
APPLICATION B SCREEN
1
10
21a1
20

FIG. 9

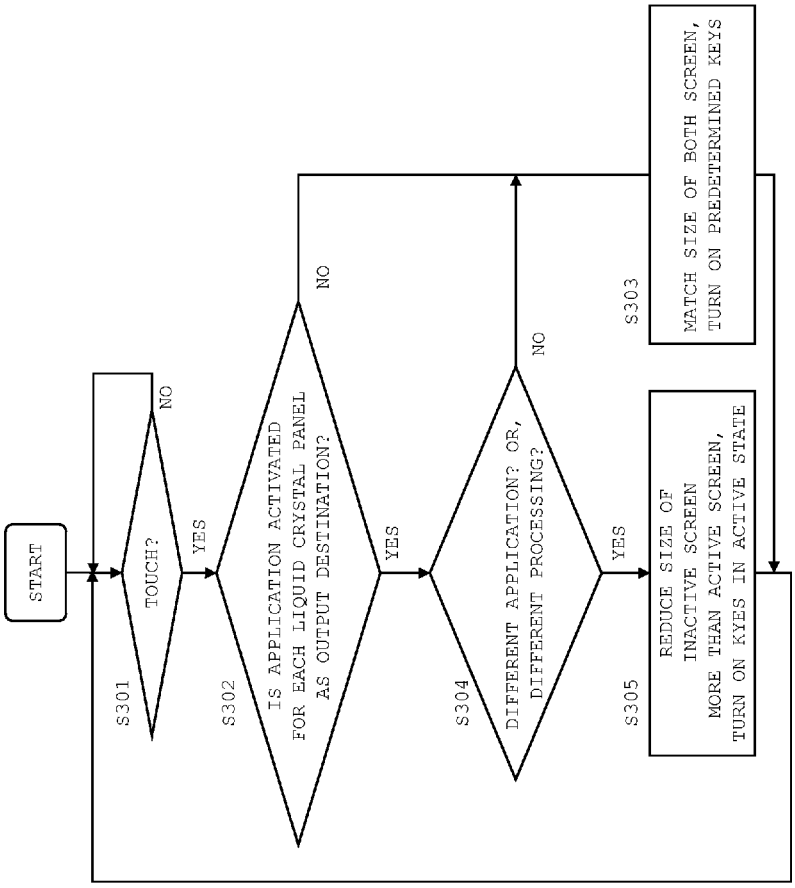
START
S301
TOUCH?
NO
YES
S302
IS APPLICATION ACTIVATED FOR EACH LIQUID CRYSTAL PANEL AS OUTPUT DESTINATION?
NO
YES
S304
DIFFERENT APPLICATION?, OR, DIFFERENT PROCESSING?
NO
YES
S303
MATCH SIZE OF BOTH SCREEN, TURN ON PREDETERMINED KEYS
S305
REDUCE SIZE OF INACTIVE SCREEN MORE THAN ACTIVE SCREEN, TURN ON KYES IN ACTIVE STATE

FIG.10

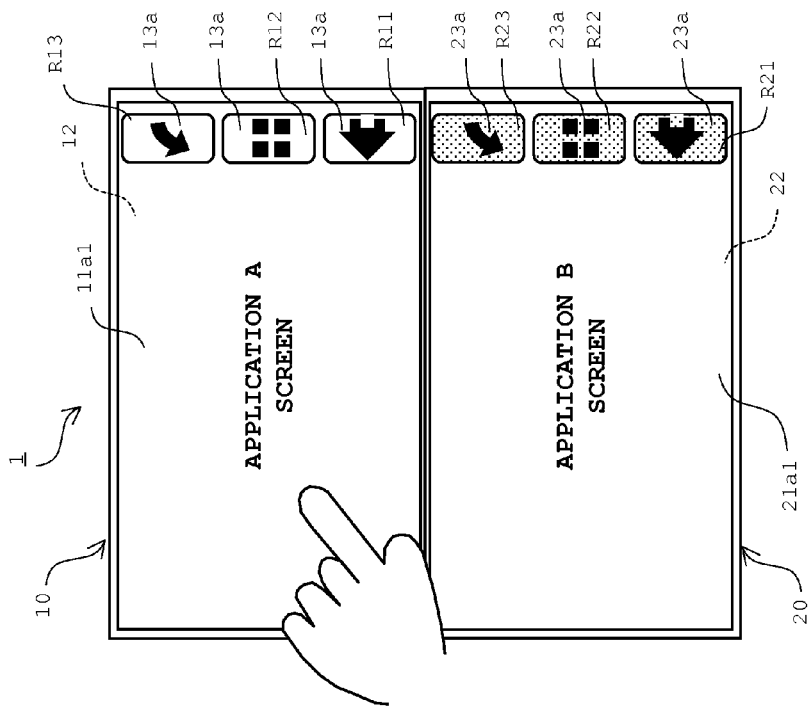
R13
13a
13a
R12
13a
R11
23a
R23
23a
R22
23a
R21
12
22
11a1
APPLICATION A SCREEN
APPLICATION B SCREEN
1
21a1
10
20

FIG.11

MOBILE TERMINAL DEVICE, STORAGE MEDIUM, AND METHOD FOR CONTROLLING MOBILE TERMINAL DEVICE

TECHNICAL FIELD

The present invention relates to a mobile terminal device such as a cellular phone, a PDA (Personal Digital Assistant) and so forth, and a storage medium and a method for controlling the mobile terminal device suitable for use in the mobile terminal device.

BACKGROUND ART

Conventionally, a mobile terminal device having two display surfaces is well known. With this kind of mobile terminal devices, a function to execute an application program (hereinafter, referred to as an "application") and to display screens based on the application on the first display surface and the second display surface, respectively, is provided.

SUMMARY OF INVENTION

Technical Problem

In the above construction, since the first display surface and the second display surface have the same shape, a user has a hard time telling which display surface s/he is operating on.

A mobile terminal device with display surfaces, which are operation targets of the user, that can be easily distinguished, is desired.

Solution to Problem

A mobile terminal device related to the first aspect of the present invention includes a first display module; a second display module; a first detecting module which detects an input with respect to the first display module; a second detecting module which detects an input with respect to the second display module; an executing module which executes a first processing according to the input detected by the first detecting module and executes a second processing according to the input detected by the second detecting module; and a control module which displays a screen based on the first processing executed by the execution module on the first display module and displays a screen based on the second processing executed by the execution module on the second display module. Here, the control module executes a control for distinguishing the display module displaying the screen in an active state from the display module displaying the screen in an inactive state between the first display module and the second display module with respect to at least one of the first display module and the second display module.

A second aspect of the present invention relates to a storage medium which holds a computer program applied to a mobile terminal device. The mobile terminal device includes a first display module, a second display module, a first detecting module which detects an input with respect to the first display module, and a second detecting module which detects an input with respect to the second display module. The computer program provides a computer of the mobile terminal device with functions of executing a first processing according to the input detected by the first detecting module and executing a second processing according to the input detected by the second detecting module; displaying a screen based on the executed first processing on the first display module and displaying a screen based on the executed second processing on the second display module; and executing a control for distinguishing the display module displaying the screen in an active state from the display module displaying the screen in an inactive state between the first display module and second display module with respect to at least one of the first display module and the second display module.

A third aspect of the present invention relates to a controlling method of a mobile terminal device including a first display module, a second display module, a first detecting module which detects an input with respect to the first display module, and a second detecting module which detects an input with respect to the second display module. The controlling method relating to the present aspect includes steps of displaying a screen based on a first processing executed according to the input detected by the first detecting module on the first display module and displaying a screen based on a second processing executed according to the input detected by the second detecting module on the second display module; and executing a control for distinguishing the display module displaying the screen in an active state from the display module displaying the screen in an inactive state between the first display module and the second display module with respect to at least one of the first display module and the second display module.

Advantageous Effects of Invention

According to an aspect of the present invention, it is possible to provide a mobile terminal device, a storage medium and a method for controlling with display surfaces, which are operation targets of the user, that can be easily distinguished.

An advantage or significance of the present invention will become clearer from the description of embodiment, as shown below. However, the following description of embodiment is simply one illustration in embodying the present invention, and the present invention is not limited by what is described in the following description of embodiment.

BRIEF DESCRIPTION OF DRAWINGS

FIG. **1** is a diagram showing an external arrangement of a cellular phone according to an embodiment.

FIGS. **2**(*a*) to **2**(*d*) are diagrams for explaining switching a state of the cellular phone according to the embodiment.

FIG. **3** is a block diagram showing an overall configuration of the cellular phone according to the embodiment.

FIGS. **4**(*a*) and **4**(*b*) are diagrams showing operation item screens displayed and screens of applications displayed on each display surface according to the embodiment.

FIGS. **5**(*a*) and **5**(*b*) are diagrams showing the screens of the applications displayed on each display surface according to the embodiment.

FIG. **6** is a flow chart showing procedures for processing of display controls for distinguishing a display displaying an active screen from a display displaying an inactive screen according to the embodiment.

FIGS. **7**(*a*) and **7**(*b*) are diagrams showing the screens of applications displayed on each display surface according to the embodiment.

FIG. **8** is a flow chart showing procedures for processing of display controls for distinguishing the display displaying the active screen from the display displaying the inactive screen according to the embodiment.

FIG. **9** is a diagram showing the screens of applications displayed on each display surface according to the embodiment.

FIG. **10** is a flow chart showing procedures for processing of display controls for distinguishing the display displaying the active screen from the display displaying the inactive screen according to the embodiment.

FIG. **11** is a diagram showing the screens of the application and key areas displayed on each display surface according to a modification example of the embodiment.

The drawings are entirely used for an explanation for an example of the embodiment, and not intended to limit a scope of the present invention.

DESCRIPTION OF EMBODIMENTS

In the following, regarding to the embodiments of the present invention will be described with reference to the drawings.

In the following explanation, a first display **11** corresponds to a "first display module" recited in the claims. A first panel sensor **12** corresponds to a "first detecting module" recited in the claims. First touch keys K**11**, K**12** and K**13** correspond to a "first key module" recited in the claims. A second display **21** corresponds to a "second display module" recited in the claims. A second panel sensor **22** corresponds to a "second detecting module" recited in the claims. A second touch keys K**21**, K**22** and K**23** correspond to a "second key module" recited in the claims. The CPU **100** corresponds to an "executing module" and a "control module" recited in the claims. A protruding portion **18**, a shaft portion **27** and a guiding groove **39** correspond to a "mechanical part" recited in the claims. It is noted that the description geared the above scope of the claims and the present embodiment is just one example, and it does not limit the scope of the claims to the present embodiment.

<Construction of Cellular Phone>

FIG. **1** is an exploded perspective view showing a configuration of a cellular phone **1**. The cellular phone **1** is composed of a first cabinet **10**, a second cabinet **20** and a holder **30** which holds the first cabinet **10** and the second cabinet **20**.

The first cabinet **10** has horizontally long rectangular solid shape. A first touch panel and first touch keys are arranged on the front surface of the first cabinet **10**.

The first touch panel includes a first display **11** and a touch sensor (hereinafter, referred to as a "first panel sensor") **12**.

The first display **11** corresponds to a display module showing an image according to a user's operation on a first display surface **11***a***1**. The first display **11** configured with a first liquid crystal panel **11***a* and a backlight (hereinafter referred to as a "first panel backlight") **11***b* (FIG. **3**). A first display surface **11***a***1** is provided on the front surface of the first liquid crystal panel **11***a*. The first panel backlight **11***b* includes one or more light sources and illuminates the first liquid crystal panel **11***a*. The first panel sensor **12** is overlapped on the first display surface **11***a***1**.

The first panel sensor **12** corresponds to a detecting module which detects an input with respect to the first display surface **11***a***1**. The first panel sensor **12** is a transparent rectangle shaped sheet and covers the first display surface **11***a***1** of the first display **11**. The first panel sensor **12** includes a first transparent electrode and a second transparent electrode arranged in a matrix state. By detecting a change in capacitance between these transparent electrodes, the first panel sensor **12** detects an input position on the first display surface **11***a***1** touched by the user and outputs a positional signal according to the detected input position. The first display surface **11***a***1** being touched by a user means, for example, that the user touches the first display surface **11***a***1** with a contact member such as a pen, etc., or a finger. The contact member or the finger touched the first display surface **11***a***1** can be held still or moved. Also, the length of time the contact member or the finger touches the first display surface **11***a***1** can be short or long.

One or more first touch keys, in this embodiment, three first touch keys K**11**, K**12** and K**13** are arranged adjacent to the first display **11**. Each touch key K**11**, K**12** or K**13** corresponds to a first key module for inputting predetermined information with respect to the first display **11** (see FIGS. **4**(*a*) and (*b*)). Each first touch key K**11**, K**12** and K**13** includes a panel (hereinafter, referred to as a "first key cover") **13***a*, a backlight (hereinafter, referred to as a "first key backlight") **13***b* and a touch sensor (hereinafter, referred to as a "first key sensor") **14**. The first key cover **13***a* displays a predetermined image.

The first key sensor **14** corresponds to a detecting module which detects an input with respect to the first key cover **13***a*. The first key sensor **14** is, for example, configured with a sensor detecting changes in capacitance, etc. The first key sensor **14** detects the change in capacitance and outputs detecting signal when the first key cover **13***a* of each first touch key K**11**, K**12** and K**13** is touched by a finger or a contact member.

In the first cabinet **10**, a camera module **15** is arranged at a position slightly back of a center. A lens window for capturing a subject image in the camera module **15** is provided on the undersurface of the first cabinet **10**.

Also, in the first cabinet **10**, a magnet **16** is arranged at a center position in the vicinity of the front face, and a magnet **17** is arranged at the right front corner.

Protruding portions **18** are provided on the right and left sides of the first cabinet **10**.

The second cabinet **20** has a horizontally long rectangular solid shape and has almost the same shape and size as the first cabinet **10**. A second touch panel and a second touch key are arranged in the second cabinet **20**.

The second touch panel includes a second display **21** and a touch sensor (hereinafter, referred to as a "second panel sensor") **22**.

The second display **21** corresponds to a display module which displays an image according to the user's operation on the second display surface **21***a***1**. The second display **21** is configured with a second liquid crystal panel **21***a* and a backlight (hereinafter, referred to as a "second panel backlight") **21***b* (FIG. **3**). A second display surface **21***a***1** is provided at the front of the second liquid crystal panel **21***a*. The second panel backlight **21***b* includes one or more light sources, and illuminates the second liquid crystal panel **21***a*. The first display **11** and the second display **21** can be configured with other display elements such as an organic EL, etc.

The second panel sensor **22** corresponds to a detecting module which detects an input with respect to the second display surface **21***a***1**. The second panel sensor **22** has the same shape and configuration with the first panel sensor **12**. The second panel sensor **22** covers the second display surface **21***a***1** of the second display **21**, detects positions on the second display surface **21***a***1** where the user touches, and outputs positional signals according to the input positions.

One or more second touch keys, in this embodiment, three second touch keys K21, K22 and K23 are arranged adjacent to the second display 21. The second touch keys K21, K22 and K23 correspond to a second key module for inputting predetermined information with respect to the second display 21. Each second touch key K21, K22 and K23 includes a panel (hereinafter, referred to as a "second key cover") 23*a*, a backlight (hereinafter, referred to as a "second key backlight") 23*b*, and a touch sensor (hereinafter, referred to as a "second key sensor") 24.

The second key sensor 24 corresponds to a detecting module which detects an input with respect to the second key cover 23*a*. The configuration and the function of the second key sensor 24 are almost the same with the configuration and the function of the first key sensor 14.

In the second cabinet 20, a magnet 25 is arranged at a center position in the vicinity of a rear face. This magnet 25 and the magnet 16 of the first cabinet 10 attract each other by magnetic force in an open state explained later.

In the second cabinet 20, a close sensor 26 is arranged at the right front corner. The close sensor 26 is composed of a hall IC and the like, for example, and outputs a sensor signal when magnetic force of the magnet 17 is detected. In the later described close state, since the magnet 17 of the first cabinet 10 is in proximity to the close sensor 26, a sensor signal is output from the close sensor 26 to the CPU 100. In contrast, since the magnet 17 of the first cabinet 10 separates from the close sensor 26 when the cellular phone 1 becomes an open state from the close state, the sensor signal is not output from the close sensor 26.

Two respective shaft portions 27 and 27 are provided on both sides of the second cabinet 20.

A holder 30 is composed of a bottom plate portion 31, a right holding portion 32 formed on a right edge part of the bottom plate portion 31, and a left holding portion 33 formed on a left edge part of the bottom plate portion 31.

Three coil strings 34 are arranged on the bottom plate portion 31 so that the coil springs 34 line in a horizontal direction. In a state where the second cabinet 20 is attached to the holder 30, the coil springs 34 abut an underside of the second cabinet 20 and give force to push up the second cabinet 20.

On an upper surface of the right holding portion 32, a microphone 35 and a power key 36 are arranged. A speaker 38 is arranged on an upper surface of the left holding portion 33. Also, a plurality of hard keys 37 are arranged on an outer surface of the right holding portion 32.

On inner sides of the right holding portion 32 and the left holding portion 33, guiding grooves 39 (only that on the left holding portion 33 is shown) are formed. The guiding grooves 39 are composed of an upper groove 39*a*, a lower groove 39*b*, and two vertical grooves 39*c*. The upper groove 39*a* and the lower groove 39*b* extend in a forward-backward direction, and the vertical grooves 39*c* extend upward and downward so as to connect the upper groove 39*a* and the lower groove 39*b*.

When the cellular phone 1 is assembled, the shaft portions 27 are inserted into the lower grooves 39*b* of the guiding grooves 39, and the second cabinet 20 is arranged in a containing region R of the holder 30. The protruding portions 18 are inserted into upper grooves 39*a* of the guiding grooves 39 and the first cabinet 10 is fitted in the containing region R of the holder 30. The first cabinet 10 is arranged on the second cabinet 20.

In this manner, the first cabinet 10 and the second cabinet 20 are contained in a vertically overlapped state into the containing region R surrounded by the bottom plate portion 31, the right holding portion 32, and the left holding portion 33. In this state, the first cabinet 10 can be slid forward and backward along the upper grooves 39*a*. The second cabinet 20 can be slid forward and backward along the lower grooves 39*b*. Also, when the second cabinet 20 moves forward and the shaft portions 27 reach the position of the vertical grooves 39*c*, the second cabinet 20 is guided by the vertical grooves 39*c* and becomes vertically slidable.

FIGS. 2(*a*) to 2(*d*) are diagrams for illustrating how the cellular phone 1 is switched from a closed state to an open state.

The closed state shown in FIG. 2(*a*) is a state that the cellular phone 1 is folded. In the closed state, the first cabinet 10 is overlapped on the second cabinet 20. The closed state corresponds to the first configuration that the second display surface 21*a*1 is covered by the first cabinet 10. In the closed state, only the first display surface 11*a*1 is exposed to the external.

As shown in FIG. 2(*b*), the first cabinet 10 is moved backward, and as shown in FIG. 2 (*c*), the second cabinet 20 is moved forward. For this reason, when the close sensor 26 does not detect the magnetic force of the magnet 17, and the sensor signals are not output, the cellular phone 1 is switched to the open state. In this open state, a part of the second display surface 21*a*1 is exposed to the external.

When the second cabinet 20 does not overlap the first cabinet 10 at all, the shaft portions 27 shown in FIG. 1 reach the position of the vertical grooves 39*c*. Since the shaft portions 27 can now move along the vertical grooves 39*c*, the second cabinet 20 can move up and down. At the moment, the second cabinet 20 rises due to elastic force of the coil springs 34 and attraction between the magnet 16 and the magnet 25.

As shown in FIG. 2(*d*), the second cabinet 20 is closely juxtaposed to the first cabinet 10, and the second display surface 21*a*1 becomes flush with the first display surface 11*a*1. The first cabinet 10 and the second cabinet 20 are aligned back and forth, and both of the first display surface 11*a*1 and the second display surface 21*a*1 are exposed to the external.

The open state corresponds to the second configuration that at least apart of the second display surface 21*a*1 is exposed to the external, as shown in FIGS. 2(*b*) to 2(*d*).

Also, since the protruding portions 18 move along the upper grooves 39*a* of the guiding grooves 39 and the shaft portions 27 move along the lower grooves 39*b*, the vertical grooves 39*c* and the upper grooves 39*a*, the close state and the open state can be switched. For this reason, the protruding portions 18, the shaft portions 27 and the guiding grooves 39 correspond to a mechanical part connecting the first cabinet 10 and the second cabinet 20 in a manner the close state and the open state can be switched.

FIG. 3 is a block diagram showing an overall configuration of the cellular phone 1. In addition to the components described above, the cellular phone 1 of the embodiment includes a CPU 100, a memory 200, a video encoder 301, an audio encoder 302, a key input circuit 303, a communication module 304, a backlight drive circuit 305, a video decoder 306, an audio decoder 307, a battery 309 and a power supply module 310.

The camera module 15 has an image pickup device such as CCD, etc. The camera module 15 digitalizes an imaging signal output from the image pickup device, subjects the imaging signal to various corrections such as gamma correction, etc., and outputs the imaging signal to the video

encoder **301**. The video encoder **301** encodes the imaging signal from the camera module **15** and outputs the imaging signal to the CPU **100**.

The microphone **35** converts collected sound into an audio signal and outputs the audio signal to the audio encoder **302**. The audio encoder **302** not only converts the analog audio signal from the microphone **35** into a digital audio signal, but also encodes and outputs the audio signal to the CPU **100**.

When the power supply key **36** or either key of the hard keys **37** is pressed, the key input circuit **303** outputs an input signal corresponding to the key to the CPU **100**.

The communication module **304** converts data from the CPU **100** into a radio signal and transmits the radio signal to base station via an antenna **304***a*. Also, the communication module **304** converts a radio signal received via the antenna **304***a* into data and outputs that data to the CPU **100**.

The backlight drive circuit **305** applies a drive signal based on a control signal from the CPU **100** to the first panel backlight **11***b*, the first key backlight **13***b*, the second panel backlight **21***b* and the second key backlight **23***b*. The first panel backlight **11***b*, the first key backlight **13***b*, the second panel backlight **21***b* and the second key backlight **23***b* turns on by a drive signal from the backlight drive circuit **305**, respectively. The first panel backlight **11***b*, the first key backlight **13***b*, the second panel backlight **21***b* and the second key backlight **23***b* illuminate the first liquid crystal panel **11***a*, the first key cover **13***a*, the second liquid crystal panel **21***a* and the second key cover **23***a* by lighting, respectively.

The video decoder **306** converts image data from the CPU **100** into video signals which can be displayed on the first liquid crystal panel **11***a* and the second liquid crystal panel **21***a*, and outputs these signals to the liquid crystal panels **11***a* and **21***a*. The first liquid crystal panel **11***a* displays an image corresponding to the video signal on the first display surface **11***a***1**. The second liquid crystal panel **21***a* displays an image corresponding to the video signal on the second display surface **21***a***1**.

The audio decoder **307** decodes an audio signal and a tone signal of various notifying sounds such as a ring tone or alarm sound, etc., from the CPU **100**, further converts the audio signal and the tone signal into an analog audio signal and an analog tone signal, and outputs the signals to the speaker **38**. The speaker **38** reproduces the audio signal, tone signal, etc., from the audio decoder **307**.

The battery **309** is for supplying electric power to the CPU **100** and each module other than the CPU **100**, and made of a secondary battery. The battery **309** is connected to the power supply module **310**.

The power supply module **310** converts voltage of the battery **309** to the amount of voltage necessary for each module and supplies the voltage to each module. The power supply module **310** supplies electric power fed via an external power supply to the battery **309** to charge the battery **309**.

The memory **200** includes ROM and RAM.

A control program for providing the CPU **100** with a control function is stored in the memory **200**. The control program includes a control program for executing a control for distinguishing the display module **11** or **21** displaying a screen in an active state from the display module **11** or **21** displaying a screens in an inactive state with respect to at least one of the display module **11** and the display module **21**. Also, various applications such as a telephone call, an electronic mail, a web browser, an image display, etc., are stored.

In memory **200**, data such as sound data, image data, text data, etc., is saved in a predetermined file format. This data is, for example, photo data taken by the camera module **15**, data input from each panel sensor **12** and **22**, data taken from outside via communication module **304**, etc.

The information related to images displayed on each display surface **11***a***1** and **21***a***1** is stored in the memory **200**. The images displayed on each display surface **11***a***1** and **21***a***1** are, for example, pictures such as icons, buttons photos, and so on, texts input in the text area, etc. The information related to the images includes information of image and the position where the image is displayed on each display surface **11***a***1** and **21***a***1**. The information of the image of icons, buttons, etc., is constructed by information of processing represented by the image. The information of the processing includes processing targets such as applications, files, etc., and processing contents such as activation, termination and so on.

Information related to the first and the second touch key is stored in the memory **200**. The information related to the first and the second touch key includes the information of processing corresponding to each touch key. For example, the first touch key K**11** corresponds to information of the processing to display an operation item screen on the first display surface **11***a***1**. The second touch key K**21** corresponds to information of the processing to display the operation item screen on the second display surface **21***a***1**. The first touch key K**12** and the second touch key K**22** corresponds to information of processing to display screens to change setting conditions or screens of predetermined applications on each display surface **11***a***1** and **21***a***1**. The first touch key K**13** and the second touch key K**23** corresponds to information of processing to display screens of applications displayed right before on each display surface **11***a***1** and **21***a***1**.

The CPU **100** drives each module constructing the cellular phone **1** such as the camera module **15**, the microphone **35**, the communication module **304**, each liquid crystal panel **11***a* and **21***a*, the speaker **38**, etc., according to the control program, based on a signal from the key input circuit **303**, each panel sensor **12** and **22**, and each key sensor **14** and **24**. The CPU **100** executes various applications such as a phone call, e-mails, etc., by driving each module constructing the cellular phone **1**.

The CPU **100** executes the processing according to the input by the user as an executing module. In concrete, when each display surface **11***a***1** and **21***a***1** is touched by the user's finger, the CPU **100** accepts positional signals corresponding to input positions from each panel sensor **12** and **22**. The CPU **100** specifies an image displayed at an input position of a positional signal and information of a processing represented by the image based on the display information of the memory **200**. The CPU **100** reads out applications and files which are the processing target from the memory **200**, executes the applications, or executes the predetermined processing with respect to the files according to the specified processing information.

For instance, as shown in FIG. **4**(*a*), when the user touches an icon A of an E-mail, the CPU **100** reads out an application A corresponding to the icon A form the memory **200** and activates the application A.

Also, when each key cover **13***a* and **23***a* is touched by a user's finger, the CPU **100** accepts a detection signal from each key sensor **14** and **24**, and identifies the key sensors **14** and **24** which output the detection signal. The CPU **100** executes a processing corresponding to the touch key

detected by the key sensors **14** and **24** according to the information of the processing.

For example, when a user touches the first touch key K**11** shown in FIG. **4**(*a*), the CPU **100** reads out the image data of the operation item screen from the memory **200** according to the information of the processing corresponding to the first touch key K**11**.

The CPU **100** outputs control signals to the video decoder **306** and the backlight drive circuit **305** as the control module. For example, the CPU **100** controls the backlight drive circuit **305** to turn off each panel backlight **11***b*, **21***b* and each key back light **13***b* and **23***b*. The CPU **100** displays images on each display surface **11***a***1** and **21***a***1** by turning on each panel backlight **11***b* and **21***b* and by controlling the video decoder **306**. The CPU **100** controls the backlight drive circuit **305** to turn on each key backlight **13***b* and **23***b*. Furthermore, the CPU **100** controls a contrast, brightness, a size of the screen, transparency of the screen, etc., when the images are displayed on each display surface **11***a***1** and **21***a***1**.

For example, the CPU **100** displays screens based on applications executed by the executing module on each display surface **11***a***1** and **21***a***1**. That is, when the application A is activated by the executing module so as the first liquid crystal panel **11***a* to be an output destination of a screen, the screen of the application A is displayed on the first display surface **11***a***1**, as shown in FIG. **4**(*b*). Also, when the image data of the operation item screens is read out by the execution module so as the first and the second liquid crystal panel **11***a* and **21***a* to be the output destination of the screens, the operation item screens are displayed on the first and the second display surfaces **11***a***1** and **21***a***1**, as shown in FIG. **4**(*a*).

When the screens of different applications are displayed on each display surface **11***a***1** and **21***a***1**, a display configuration that distinguishes a display displaying an active screen from a display displaying an inactive screen is adopted. Here, the screens based on different applications include the screens of a case that the screens displayed on the first display surface **11***a***1** and the second display surface **21***a***1** to be different to each other since the executed application which designates the first liquid crystal panel **11***a* as an output destination and the other executed application which designates the second liquid crystal panel **21***a* as an output destination are different. Further, screens based on different applications include the case when the application executed, having the output destinations of the first and the second liquid crystal panels **11***a* and **21***a*, is the same, but a plurality of processing for the application is executed in parallel while a screen for a processing is displayed on the first display surface **11***a***1** and a screen for another processing is displayed on the second display surface **21***a***1**.

For example, as shown in FIG. **4**(*b*), when the first display surface **11***a***1** is touched by the user, the first panel sensor **12** outputs the positional signal to the CUP **100**. The CPU **100** determines that the first screen displayed on the first display surface **11***a***1** is an active screen based on the positional signal. In this case, the CPU **100** displays a linear bar image on one of the edges on the first screen of the first display surface **11***a***1** to show that the first screen is in the active state. Further, the CPU **100** turns on the first key backlight **13***b* and turns off the second key backlight **23***b*. As a result, the first touch keys become brighter by being illuminated. However, the second touch keys are not illuminated, so the second touch keys are darker compared to the first touch keys. Thus, it is displayed that the screen of the first display surface **11***a***1** is in the active state and the screen on the second display surface **21***a***1** is in the inactive state.

On the other hand, as shown in FIG. **5**(*a*), when the second display surface **21***a***1** is touched by the user, the CPU **100** determines that the second screen **21***a***1** displayed on the second display surface **21***a***1** is in the active state based on the positional signal from the second panel sensor **22**. In this case, the CPU **100** displays the bar image on the edge of the second screen to show that the second screen is in the active state. Moreover, the CPU **100** turns on the second key backlight **23***b* and turns off the first key backlight **13***b*. As a result, it is displayed that the screen of the first display surface **11***a***1** is in the inactive state, and that the screen of the second display surface **21***a***1** is in the active state.

When the screens based on the different applications are not displayed on the first and the second display surfaces **11***a***1** and **21***a***1**, it is not necessary to define the active screen and the inactive screen, therefore the CPU **100** does not execute the display control to distinguish the display displaying the active screen from the display displaying the inactive screen. For example, as shown in FIG. **4**(*a*), when the screen based on the application is displayed on neither of the first and the second display surfaces **11***a***1** and the **21***a***1**, each predetermined first touch key K**11**, K**12** and K**13** is turned off, and each second touch key K**21**, K**22** and K**23** is turned on. Also, as shown in FIG. **5**(*b*), when screens A**1** and A**2** based on an application A are displayed on the first and the second display surfaces **11***a***1** and **21***a***1**, each predetermined first touch key K**11**, K**12** and K**13** is turned off, and each second touch key K**21**, K**22** and K**23** is turned on.

Here, the state where the touch keys are turned on is in an active state, and the state where the touch keys are turned off is in an inactive state. For this reason, even when the touch keys in the inactive state are touched, the CPU **100** does not execute a processing according to the input position. Also, when the touch keys in the inactive state are touched, the CPU **100** turns on the touch keys so as to be in the active state.

<Procedures for Processing of the First Embodiment>

FIG. **4**(*a*) is a diagram showing an operation item screen displayed on the first and the second display surfaces **11***a***1** and **21***a***1**. FIG. **4**(*b*) is a diagram showing a screen of an application A displayed on the first display surface **11***a***1** and a screen of an application B displayed on the second display surface **21***a***1**. FIG. **5**(*a*) is a diagram showing the screen of the application A displayed on the first display surface **11***a***1** and the screen of the application B displayed on the second display surface **21***a***1**. FIG. **5**(*b*) is a diagram showing a first screen A**1** of the application A displayed on the first display surface **11***a***1** and a second screen A**2** of the application A displayed on the second display surface **21***a***1**. FIG. **6** is a flow chart showing procedures of a display control for distinguishing a display displaying an active screen from a display displaying an inactive screen.

When a function executing the display control is set to distinguish the display displaying the active screen from the display displaying the inactive screen, a display control processing is executed by the CPU **100**. With this execution of the display control processing, an image showing the active state is displayed on the screen in the active state. With the execution of the display control processing, further the touch keys corresponding to the display surface **11***a***1** or **21***a***1** displaying the screen in the active state are turned on, and the touch keys corresponding to the display surface **11***a***1** or **21***a***1** displaying the screen in the inactive state are turned off.

In a state where each predetermined screen is displayed on the first display surface **11***a***1** and the second display

surface **21***a***1**, the CPU **100** monitors whether each display surface **11***a***1** and **21***a***1** are operated on or not (S**101**).

When each display surface **11***a***1** and **21***a***1** is touched (S**101**: YES), it is determined whether the application is executed or not so as each liquid crystal panel **11***a***1** and **21***a***1** to be an output destination (S**102**). As an example, as shown in FIG. **4**(*a*), when the operation item screens are displayed on each display surface **11***a***1** and **21***a***1**, the application is not executed (S**102**: NO). In this case, since the user does not need to identify the active state or the inactive state, the CPU **100** turns on each predetermined second touch key K**21**, K**22** and K**23**, and turns off the other first touch keys K**11**, K**12** and K**13** (S**103**).

Also, in the operation item screen shown in FIG. **4** (*a*), when the icon A is touched by the user, the CPU **100** activates the application A represented by the icon A so as a first liquid crystal panel **11***a* to be an output destination of the screen, and displays the screen of the application A on the first display surface **11***a***1**. The CPU **100** keeps the state to display the operation item screen on the second display surface **21***a***1**. In such a state, when each display surface **11***a***1** and **21***a***1** is touched (S**101**: YES), since the application is not executed for the second liquid crystal panel **21***a* as the output destination (S**102**: NO), the state that each predetermined second touch key K**21**, **22** and **23** is turned on and each first touch key K**11**, K**12** and K**13** is turned off is kept (S**103**).

Next, in a state where the screen of the application A is displayed on the first display surface **11***a***1**, and the operation item screen is displayed on the second display surface **21***a***1**, when an icon G on the operation item screen is touched, the CPU **100** activates the application B so as the second liquid crystal panel **21***a* become the output destination of the screen, and displays the screen of the application B on the second display surface **21***a***1** (see FIG. **4**(*b*)). In such a state, when each display surface **11***a***1** and **21***a***1** is touched (S**101**: YES), it is determined that the applications A and B are activated so as each liquid crystal panel **11***a* and **21***a* to be as the output destination (S**102**: YES).

Next, each application which executes each liquid crystal panel **11***a* and **21***a* as the output destination is different to each other or not, or each processing of the application is different to each other or not (that is, whether different processing for the same application is executed on each liquid crystal panel **11***a* and **21***a* separately and independently or not) are determined (S**104**). Here, the application A and the application B do not match, so it is determined that the applications are different (S**104**: YES).

As shown in FIG. **4**(*b*), when the first display surface **11***a***1** is touched, the CPU **100** sets the screen of the application A displayed on the first display surface **11***a***1** as an active state. Then, the CPU **100** displays the bar image showing that the screen of the application A is in the active state on the edge of the screen of the application A (S**105**). Further, the CPU **100** turns on each first touch key K**11**, K**12** and K**13**, and turns off each second touch key K**21**, K**22** and K**23** (S**105**). For this reason, the user is notified that the screen of the application A displayed on the first display surface **11***a***1** is in active state, that is the screen of the application A is an operation target by the user.

Secondly, as shown in FIG. **5**(*a*), when the user touches the second display surface **21***a***1** (S**101**: YES), the CPU **100** makes the transition for the screen of the application B displayed on the second display surface **21***a***1** into an active state. In an example, as shown in FIG. **5**(*a*), each liquid crystal panel **11***a* and **21***a* is set as the output destination, and the different application A and B are already activated (S**102**: YES, S**104**: YES). For this reason, the CPU **100** displays the bar image showing the active state on the second display surface **21***a***1**, instead of the first display surface **11***a***1** (S**105**). Further, the CPU **100** turns on each second touch key K**21**, K**22** and K**23**, and turns off each first touch key K**11**, K**12** and K**13** (S**105**). As a result, the user is notified that the screen of the application B displayed on the second display surface **21***a***1** is in active state, that is the screen of the application B is an operation target by the user.

Also, for example, from a state that the application A and the application B are executed shown in FIG. **5**(*a*), the application B can be terminated. Upon the termination of the application B, the CPU **100** displays the first screen A**1** of the application A on the first display surface **11***a***1** and the second screen A**2** of the application A on the second display surface **21***a***1**, as shown in FIG. **5**(*b*). In this display configuration, the application is activated so as each liquid crystal panel **11***a* and **21***a* to be the output destinations (S**102**: YES), the user's operation target is only one, which is the application A (S**104**: NO). Thus, since it is not necessary to identify the active state, the CPU **100** deletes the bar image showing the active state, further turns on each predetermined second touch key K**21**, K**22** and K**23**, and then turns off each first touch key K**11**, K**12** and K**13** (S**103**).

According to the present embodiment, in a state where screens based on different applications or different processing are displayed on each display surface **11***a***1** and **21***a***1**, when an operation is performed on the display surfaces **11***a***1** and **21***a***1** by the user, the bar is displayed on the display surface to be the operation target based on the operation between the display surfaces **11***a***1** and **21***a***1**. That is, the screen which is the target of the operation by the user is notified to the user. Thus, it is easy to see that the screen is made active by the operation of the user.

Also, according to the present embodiment, when the screens displayed on the display surfaces **11***a***1** and **21***a***1** are in the active state, the touch keys corresponding to the display surfaces **11***a***1** and **21***a***1** are turned on. Thus, for the user, it is easier to see that the screens are in the active state, and further it is easy to see that the input for the touch keys is in a state to be accepted.

Further, according to the present embodiment, even when the screens are displayed on the first and the second display surfaces **11***a***1** and **21***a***1**, if the screen is the screen based on one processing regarding one application, a display configuration to distinguish whether the screen is active or not is not taken. For this reason, the user can easily see that the operation target is a screen based on one processing for one application.

<The Second Embodiment>

In the first embodiment, by displaying an image showing an active state on a screen in an active state, and by turning on or off touch keys, a control to distinguish a screen of an active state from a screen of an inactive state is executed. In contrast, in the second embodiment, by lowering the brightness of the screen in the inactive state compared to the brightness of the screen in the active state, the control to distinguish the screen in the active state from the screen in the inactive state is executed.

FIG. **7**(*a*) is a diagram showing a screen of an application displayed on the first display surface **11***a***1** as an active screen and a screen of an application B displayed on the second display surface **21***a***1** as an inactive screen. FIG. **7**(*b*) is a diagram showing a first screen A**1** of the application A displayed on the first display surface **11***a***1** and a second screen A**2** of the application A displayed on the second display surface **21***a***1**. FIG. **8** is a flow chart showing a

processing procedure of a display control for distinguishing a display displaying an active screen from a display displaying an inactive screen.

Since the processing of S201, 202 and S204 in FIG. 8 is the same with the processing of S101, S102 and S104 in FIG. 6, respectively, an explanation is not repeated.

As shown in FIG. 7(*a*), when the first display surface 11*a*1 is touched by the user (S201: YES), when different applications A and B are activated having each liquid crystal panel 11*a* and 21*a* as output destinations (S202: YES, S204: YES), the CPU 100 lowers the brightness of the screen of the application B which is the screen in the inactive state so that the brightness becomes lower than the brightness of the application A which is the screen in the active state (S205). Also, the CPU 100 turns on each first touch key K11, K12 and K13, and turns off each second touch key K21, K22 and K23 (S205). For this, the user is notified that the screen of the application A displayed on the first display surface 11*a*1 is in the active state.

Also, when the first display surface 11*a*1 or the second display surface 21*a*1 is touched by the user (S201: YES), as shown in FIG. 7(*b*), when the first screen A1 and the second screen A2 of the application A are displayed on the first and the second display surface 11*a*1 and 21*a*1 (S202: YES, S204: NO), the CPU 100 displays the screen of the first display surface 11*a*1 and the screen of the second display surface 21*a*1 with the same brightness to each other. Also, the CPU 100 turns on each predetermined second touch key K21, K22 and K23, and turns off the other first touch key K11, K12 and K13 (S203).

When the operation item screen is displayed on at least one of the first display surface 11*a*1 and the second display surface 21*a*1 (S202: NO), the CPU 100 displays the screens of the first display surface 11*a*1 and the second display surface 21*a*1 at the same brightness to each other and turns on the predetermined touch keys (S203).

According to the present embodiment, while screens based on different applications or different processing are displayed on each display surface 11*a*1 and 21*a*1, a screen is displayed on the other display surface at lower brightness than the brightness of the display surface operated by the user. With the difference in the brightness of the screens, it is easy to see whether the screen displayed on the display surface is active or not.

<The Third Embodiment>

In the second embodiment, the control to distinguish a screen in an active state from a screen in an inactive state by the difference in brightness is executed. In contrast, in the third embodiment, the control to distinguish the screen in the active state from the screen in the inactive state by making the size of the inactive state screen smaller than the size of the active state screen and by turning on or off the touch keys is executed.

FIG. 9 is a diagram showing a screen of an application A displayed on a first display surface 11*a*1 as an active screen and a screen of an application B displayed on a second display surface 21*a*1 as an inactive screen. FIG. 10 is a flow chart showing a processing of a display control for distinguishing a display displaying an active screen from a display displaying an inactive screen.

Since the processing of S301, S302 and S304 in FIG. 10 is the same with the processing of S101, S102 and S104 in FIG. 6, respectively, an explanation is not repeated.

As shown in FIG. 9, when the first display surface 11*a*1 is touched by the user (S301: YES), screens of different applications A and B are displayed on each display surface 11*a*1 and 21*a*1 (S302: YES, S204: YES). In this case, the CPU 100 reduces a size of the screen of the application B which is in the inactive state on the second display surface 21*a*1. The CPU 100 reduces the screen of the application B so as the size of the screen of the Application B to become smaller than the size of the screen of the application A in the active state on the first display surface 11*a*1. Also, the CPU 100 turns on each first touch key K11, K12 and K13 corresponding to the first display surface 11*a*1 and turns off each second touch key K21, K22 and K23 corresponding to the second display surface 21*a*1 (S305). Because of this difference in size of the screens, the user is notified that the screen of the first display surface 11*a*1 is in the active state.

Also, as shown in FIG. 7(*b*), when the first and the second display surface 11*a*1 and 21*a*1 are touched by the user (S301: YES), there is a case that the first screen A1 and the second screen A2 of the application A are displayed on the first and the second display surface 11*a*1 and 21*a*1, respectively (S302: YES, S304: NO). In this case, there is no need to define the active screen and the inactive screen, the CPU 100 does not execute the display control for distinguishing the display displaying the active screen from the display displaying the inactive screen. That is, the CPU 100 displays the screen of the first display surface 11*a*1 and the screen of the second display surface 21*a*1 in the same size (S303). Besides, the CPU 100 turns on each of the predetermined second touch key K21, K22 and K23 and turns off each of the other first touch key K11, K12 and K13 (S303).

Also in a case where the operation item screen is displayed on at least one of the first display surface 11*a*1 and the second display surface 21*a*1 (S302: NO), the CPU 100 displays the screen of the first display surface 11*a*1 and the screen of the second display surface 21*a*1 in the same size and turns on the predetermined touch keys (S303).

According to the present embodiment, while screens based on different applications or different processing are displayed on each display surface 11*a*1 and 21*a*1, a size of the inactive state screen is set smaller than the size of the active state screen. Thus, since the screen in the inactive state is displayed hard to see compared to the screen in the active state, the user can easily distinguish the screen in the active state displayed on the display surface which is an operation target from the screen in the inactive state displayed on the display surface which is not the operation target.

<Other Embodiment>

The embodiment of the present invention has been described above, but the present invention is not limited to the above embodiment. Also, the embodiment of the present invention may be variously modified.

For example, in the above embodiment, the first and the second touch keys are provided adjacent to the first and the second display 11 and 21, respectively, however the arrangement of the first and the second touch keys is not limited to this arrangement.

Also, in the above embodiment, each touch panel and each touch key are arranged on each cabinet 10 and 20, however each touch key does not need to be provided on each cabinet. In this case, with the state of the screens displayed on the display surfaces 11*a*1 and 21*a*1 of each touch panel, the screen is identified whether it is in the active state or the inactive state.

Further, when each touch key is not provided on each cabinet 10 and 20, as shown in FIG. 11, key areas R11, R12, R13, R21, R22 and R23 can be provided on apart of each display surface 11*a*1 and 21*a*1. As shown in FIG. 11, when the screen of the application A displayed on the display surface 11*a*1 is the active screen, a color tone of the key

areas R21, R22 and R23 of the display surface 21a1 displaying the inactive screen is darkened, compared to the color tone of the key areas R11, R12 and R23 of the display surface 11a1 displaying the active screen. For this reason, a user can tell the state of each display surface easily, and it would be easy to see whether the input to the key areas is capable or not.

Also, in the first embodiment, in the display surface operated by the user, the bar image showing the active state is displayed and the touch keys are turned on, then the touch keys on the display surface of the inactive state are turned off. In contrast, a configuration that the bar image showing the active state is not displayed on the screen on the display surface operated by the user, but the touch keys are turned on, and the touch keys on the display surface of the inactive state are turned off can be employed. In this case, the user can tell the state of the screens easily by the on/off state of the touch key.

Moreover, the configuration that the bar image showing the active state is displayed on the screen on the display surface operated by the user, the touch keys are turned on, and further on the display surface of the inactive state, the touch keys are kept turned on can be employed. In this case, because of the bar image showing the active state, the user can tell the state of the screen easily.

Furthermore, in the first embodiment, the bar image is displayed on apart of the edge of the screen as an image showing the active state, the image showing the active state is not limited to this image. For example, an image of a frame surrounding the edges of the screen in the active state can be displayed.

Besides, in the above embodiment, a display control to distinguish the display module displaying the screen in the active state from the display module displaying the screen in the inactive state according to the images displayed on each display surface 11a1 and 21a1, a brightness of the screens, a size of the screens and a brightness of the touch keys corresponding to each display surface 11a1 and 21a1 was executed. With this kind of display control, or instead of such a display control, a control to distinguish the display module displaying the screen in the active state from the display module displaying the screen in the inactive state by sound, light, etc., can be further executed. For example, each cabinet are provided with a lamp module to display the state of the screens (the active state or the inactive state). By turning on the lamp modules of the cabinets 10 and 20 where the active screen is displayed on, with the light from the lamp modules, a state of each screen is notified.

Further, in the above embodiment, the cellular phone 1 was used, however mobile terminal devices such as a PDA, a portable game machine, etc., can be used.

The embodiment of the present invention may be modified variously and suitably within the scope of the technical idea described in claims. For example, part or all of the above embodiment can be combined.

REFERENCE SIGNS LIST

1 Cellular phone
10 First cabinet
11 First display
12 First panel sensor
13 First key display
14 First key sensor
18 Protruding portion
20 Second cabinet
21 Second display
22 Second panel sensor
23 Second key display
24 Second key sensor
27 Shaft portion
39 Guiding grooves
100 CPU

The invention claimed is:

1. A mobile terminal device, comprising:
a first touch panel comprising a first display;
a second touch panel comprising a second display: and
at least one processor that
outputs a first screen for a first application in an inactive state to the first display while outputting a second screen for a second application, that is different than the first application, in an active state to the second display, wherein the second screen in the active state comprises a linear bar image indicating an active state, while the first screen in the inactive state does not comprise the linear bar image, to thereby visually distinguish the active state of the second screen from the inactive state of the first screen,
detects that a touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second screen is being output in an active state to the second display, and,
in response to the detection that the touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second screen is being output in an active state to the second display,
switches the first screen to the active state,
switches the second screen to the inactive state, and
moves the linear bar image from the second screen to the first screen to thereby visually distinguish the active state of the first screen from the inactive state of the second screen.

2. The mobile terminal device according to claim 1, wherein screen in the inactive state is further visually distinguished from a screen in the inactive state by having a higher brightness.

3. The mobile terminal device according to claim 1, wherein a screen in the inactive state is further visually distinguished from a screen in the inactive state by having a larger size.

4. The mobile terminal device according to claim 1, wherein the first display includes a first key area for inputting a predetermined information, wherein the second display includes a second key area for inputting a predetermined information, and wherein the at least one processor, in response to the detection that the touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second screen is being output in an active state to the second display, further darkens the second key area of the second display.

5. The mobile terminal device according to claim 1, further comprising:
a first key module for inputting predetermined information, capable of being lit and provided corresponding to the first touch panel; and
a second key module for inputting predetermined information, capable of being lit and provided corresponding to the second touch panel.
wherein the at least on processor, in response to the detection that the touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second

screen is being output in an active state to the second display, further darkens the second key module.

6. The mobile terminal device according to claim **1**, further comprising:

a first cabinet having the first touch panel;

a second cabinet comprising the second touch panel; and

a mechanical part which connects the first cabinet and the second cabinet such that the first and second cabinets are switchable between a first configuration, in which the first touch panel is exposed externally and the second touch panel is covered by the first cabinet, and a second configuration, in which at least a part of the second touch panel and the first touch panel are exposed externally.

7. A non-transitory storage medium storing a computer program which, when executed by a processor, causes the processor to:

outputs a first screen for a first application in an inactive state to a first display of a first touch panel while outputting a second screen for a second application, that is different than the first application, in an active state to a second display of a second touch panel, that is different than the first touch panel, wherein the second screen in the active state comprises a linear bar image indicating an active state, while the first screen in the inactive state does not comprise the linear bar image, to thereby visually distinguish the active state of the second screen from the inactive state of the first screen;

detect that a touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display of the first touch panel while the second screen is being output in an active state to the second display of the second touch panel; and,

in response to the detection that the touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second screen is being output in an active state to the second display,

switch the first screen to the active state,

switch the second screen to the inactive state, and

move the linear bar image from the second screen to the first screen to thereby visually distinguish the active state of the first screen from the inactive state of the second screen.

8. A control method of a mobile terminal device comprising a first touch panel comprising a first display, and a second touch panel comprising a second display, wherein the control method comprises:

outputting a first screen for a first application in an inactive state to the first display while outputting a second screen for a second application, that is different than the first application, in an active state to the second display, wherein the second screen in the active state comprises a linear bar image indicating an active state, while the first screen in the inactive state does not comprise the linear bar image, to thereby visually distinguish the active state of the second screen from the inactive state of the first screen;

detecting that a touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second screen is being output in an active state to the second display; and,

in response to the detection that the touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second screen is being output in an active state to the second display,

switching the first screen to the active state,

switching the second screen to the inactive state, and

moving the linear bar image from the second screen to the first screen to thereby visually distinguish the active state of the first screen from the inactive state of the second screen.

9. The mobile terminal device according to claim **1**,

wherein the first display includes a first key area for inputting a predetermined information,

wherein the second display includes a second key area for inputting a predetermined information, and

wherein the at least one processor, in response to the detection that the touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second screen is being output in an active state to the second display, displays the linear bar image adjacent to the first key area.

10. The non-transitory storage medium according to claim **7**,

wherein the first display includes a first key area for inputting a predetermined information,

wherein the second display includes a second key area for inputting a predetermined information, and

wherein the computer program, when executed by a processor, further causes the processor to, in response to the detection that the touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second screen is being output in an active state to the second display, display the linear bar image adjacent to the first key area.

11. The method according to claim **8**,

wherein the first display includes a first key area for inputting a predetermined information,

wherein the second display includes a second key area for inputting a predetermined information, and

wherein the method further comprises, in response to the detection that the touch to the first touch panel is performed while the first screen is being output in an inactive state to the first display while the second screen is being output in an active state to the second display, displaying the linear bar image adjacent to the first key area.

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